

REMARKS

Applicant thanks the Examiner for the thorough consideration given the present application. Claims 1-29 are currently being prosecuted. The Examiner is respectfully requested to reconsider the rejections in view of the Amendments and Remarks as set forth hereinbelow.

CLAIM FOR PRIORITY

It is gratefully acknowledged that the Examiner has recognized the Applicants' claim for foreign priority. In view of the fact that the Applicants' claim for foreign priority has been perfected, no additional action is required from the Applicant at this time.

DRAWINGS

The Examiner has not approved the Formal Drawings submitted by the Applicant. It is respectfully submitted that the drawings comply with the requirements of the USPTO. If the Examiner has any objections to the Formal Drawings please contact the undersigned as soon as possible so that appropriate action may be taken. No further action is believed to be necessary at this time unless the undersigned receives a notice from the Examiner.

ACKNOWLEDGEMENT OF INFORMATION DISCLOSURE STATEMENT

The Examiner has acknowledged the Information Disclosure Statements filed on January 19, 2006 and July 5, 2006. An initialed copy of the PTO-1449 has been received from the Examiner. No further action is necessary at this time.

REJECTION UNDER 35 USC 103

Claims 1-10, 12, 14-23, 25 and 27-29 stand rejected under 35 USC 103 as being unpatentable over Heed et al, WO 01/39548 in view of Nelson, US 6,760,447. Claims 11 and 24 stand rejected under 35 USC 103 as being unpatentable over Heed et al, WO 01/39548 and Nelson, US 6,760,447 as applied to claim 1 and further in view of Kraemer, US 6,590,983. Claims 13 and 26 stand rejected under 35 USC 103 as being unpatentable over Heed et al, WO 01/39548 and Nelson, US 6,760,447 as applied to claim 1 and further in view of Desper, US 5,896,456. These rejections are respectfully traversed.

The present invention relates to a combination of method steps as set forth in claims 1-13, a combination of elements as set forth in device claims 14-26 and a combination of system claims as set forth in claims 27-29 for processing an input audio stereo signal comprising two input signals for reproduction of a processed stereo signal in an audio stereo reproduction system. The method, device and system include at least one pair of loudspeaker elements. A left output signal is or is equivalent to the sum of the mid input signal and the side input signal. A right output signal is or is equivalent to the sum of the mid input signal

and the side input signal phase shifted 180° . The method, device and system is characterized in that at least part of the side input signal or the mid input signal in the frequency range 4 kHz to 9 kHz is phase shifted at least 45° but no more than 135° relative to the other signal prior to or at the said production of the left and right output signals.

The Heed et al patent discloses a system that is partly similar to the system according to the present invention. As acknowledged by the Examiner on page 3, lines 3-8, the Heed et al patent fails to disclose the step or means wherein at least a part of the side input signal (S) or the mid input signal (M) in the frequency range 4 kHz-9 kHz is phase shifted at least 45° but no more than 135° relative to the other signal prior to or at the production of the left and right output signals.

The Examiner relies on the Nelson et al patent to render obvious the subject matter as set forth in the claims. The Nelson et al patent describes a sound reproduction system that aims to solve the problem of conventional sound reproduction systems, wherein the stereo image is present at, in principle, one location only, and wherein only a slight movement to either side from this preferred point has the result that the image brakes down completely.

According to the Nelson et al patent, the above problem is solved by a sound reproduction system using two closely located loudspeakers. This far, Nelson et al has some similarities with the present invention. However, with regard to the signal processing, which together with the additional method steps, elements in the device claims and the elements in the system claims is one of the objects of the present invention, the two solutions differ substantially. Nelson et al does not in any way mention or disclose a signal processing

according to the present invention, that is, a signal processing, i.e. a system wherein a mid input signal and a side input signal is processed in a very specific manner.

Further, the disclosure in Figure 18 of the Nelson et al patent is the difference between the phase responses shown in Figure 17. That is, the figures show the phase difference between the final signals that are supplied to the loudspeaker elements. According to the present invention, however, it is not the actual phase difference between the two that produces left and right output signals that is the key to the invention. Instead it is a phase shift of at least part of the side input signal or mid input signal in a specific frequency range that is performed prior to the production of the left and right output signals, and it is this specific step in the method claims, the means in the device claims and the means in the system claims for the production of the left and right output signals.

Consequently, Nelson et al is in no way related to the signal production according to the present invention, and no guidance can be found in the description or drawings of the Nelson et al patent as to how to obtain a signal production according to the present invention.

The Kraemer and Desper were merely relied on for disclosing additional features set forth in dependent claims. Since the Kraemer and Desper patents do not overcome the deficiencies of the primary references and do not render obvious the subject matter as set forth in the claims, the present application defines patentable subject over the combination or references as relied on by the Examiner.

The Applicant respectfully submits that the Examiner's rejections based on 35 U.S.C. § 103 have been obviated.

NO PROSECUTION HISTORY ESTOPPEL

The claims have not been amended. No prosecution history estoppel would apply to the interpretation of the limitations set forth in the claims in view of the fact that this subject matter has been continuously presented since the original filing date of the present application.

REQUEST FOR INTERVIEW

If the Examiner has any questions with regard to this application please contact the undersigned so that an interview can be arranged in connection with this application.

CONCLUSION

In view of the above remarks, it is believed that the claims clearly distinguish over the patents relied on by the Examiner, either alone or in combination.

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but to merely show the state of the art, no comment need be made with respect thereto.

In view of the above amendments and remarks, reconsideration of the rejections and allowance of all of the claims are respectfully requested.

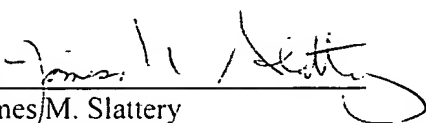
All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

A prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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